

ABSTRACT OF THE DISCLOSURE

A power conversion apparatus of this invention includes a power switching device, a voltage sensor, a
5 current sensor, and a device controller connected to the
switching device, the voltage sensor, and the current
sensor. The voltage sensor detects an output voltage of the
switching device to output a first signal depending on the
output voltage, and the current sensor detects an output
10 current of the switching device to output a second signal
depending on the output current. The device controller
includes a driver connected to the switching device and a
correcter connected to the driver, the voltage sensor and
the current sensor. The driver outputs a third drive
15 signal to the switching device. The correcter monitors a
switching loss and a surge voltage by using the first and
second signals, and corrects the third signal depending on
values of the switching loss and the surge voltage.

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